



OFFICE OF THE DIRECTOR

Department of Transportation
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Providence, RI 02903

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June 23, 2015

Her Excellency, Governor Gina M. Raimondo
State of Rhode Island and Providence Plantations
State House- Room 228
Providence, RI 02903

RE: Closure of Park Avenue Bridge in Cranston, RI

Dear Governor Raimondo:

On May 6, 2015, I ordered accelerated bridge inspections of 230 structurally deficient bridges. During the Monday morning inspection of the Park Avenue Bridge, one of our consultant engineers noted the timber planks that make up the deck were severely deteriorated and stressed from the weight of automobile traffic. After the inspection, the consultant produced a report (attached) recommending the closure of the Park Avenue Bridge over Amtrak in Cranston, RI (Rhode Island Bridge number 99201) to vehicular traffic.

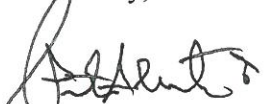
This morning, RIDOT's bridge engineering team informed me that they received the inspection report from our consultant recommending closure. Our engineering team reviewed the report and concurs with their recommendation. In addition, I verified the consultant's report by sending John Bruno, Supervising Civil Engineer, Bridge Inspector, to inspect the bridge. He also concurred with the consultants findings. I have also been in contact with Carlos Machado, the Division Administrator of the Federal Highway Administration (FHWA). He was informed of the issue, personally visited the site of the bridge, and concurs with the closure. (See attachment) As such, it is my professional opinion that this bridge is in imminent danger of collapse, and I am ordering its immediate closure.

RIDOT is preparing detours routes and will install signs along the detours with both fixed and electronic message signs. We are also working with state and local police to minimize traffic disruption. The bridge carries over 15,000 daily crossings.

Our engineers are examining options to both temporarily and permanently repair the bridge and reopen it to traffic in the shortest of period of time. The bridge carries the roadway over Amtrak's Northeast Corridor. Typically, any work on a bridge over Amtrak requires night time work periods in order to minimize disruption of rail operations.

I will report back to you with a timeline for reopening the bridge once we have better information on our options.

Sincerely,



Peter Alviti, Jr., P.E.
Director

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION
BRIDGE ENGINEERING-BRIDGE INSPECTION UNIT**

**BRIDGE CRITICAL FINDINGS
(Form BI-006)**

Bridge No.:	092201
Bridge Name:	Park Ave RR
Route Carried:	Park Ave
Crossing:	AMTRAK
City/Town:	Cranston

Date Reported:
6/22/2015
Time Reported:
3:30 PM
Reported By:
Jeffrey Sam
Firm/Agency:
AECOM

ISSUE

The nail laminated timber plank deck of the Park Ave RR bridge is exhibiting severe overstress due to independent action of the timber planks. There is vertical misalignment of up to 1" between individual timber planks beneath the four (4) wheel lines of the 2-way roadway. These areas of overstress are typically 3' to 4' wide along the full length of the bridge. The worst conditions exist at the west end of the bridge between floorbeams A and B where there are multiple fractured planks (**see photos 1 – 5**). In isolated locations, up to four (4) adjacent planks are fractured. Visible deflection greater than 1" was noted during the inspection under car traffic.

In addition, there is scattered rot of the timber planks with mold growth, particularly over the floorbeams, typically extending 8" in each direction beyond the floorbeam top flanges. The rot is typically 1/2" deep with soft timber throughout (**see Photo 6**).

ACTION/COMMENTS

Due to overstressed and fractured timber deck planks, which are acting independently from one another and deflecting beyond tolerable limits under car loading, **AECOM recommends that the bridge be CLOSED TO ALL TRAFFIC IMMEDIATELY.**

Notes:

1. Attached are photos with proper labels showing the critical deficiencies.

PHOTO #1
(706)

ROUTINE INSPECTION

INDEPENDENT ACTION OF TIMBER
PLANKS OVER A 4' WIDTH WITH
VERTICAL MISALIGNMENT UP TO
 $\frac{3}{4}$ " AND (3) FRACTURED PLANKS

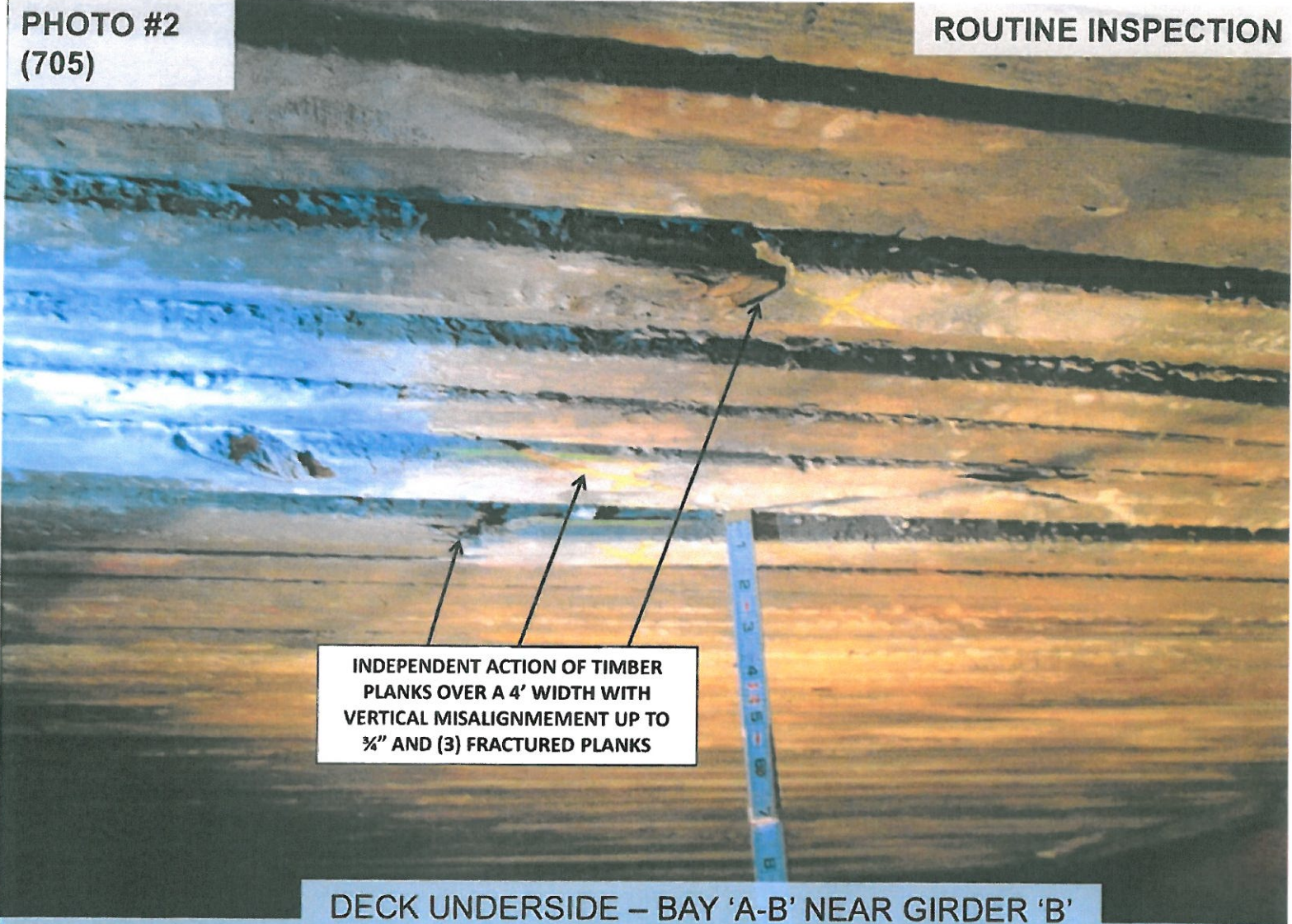
DECK UNDERSIDE – BAY 'A-B' NEAR GIRDER 'B'
(LOOKING NORTH)

BRIDGE #092201

6/21/2015

PHOTO #2
(705)

ROUTINE INSPECTION



INDEPENDENT ACTION OF TIMBER
PLANKS OVER A 4' WIDTH WITH
VERTICAL MISALIGNMENT UP TO
 $\frac{3}{4}$ " AND (3) FRACTURED PLANKS

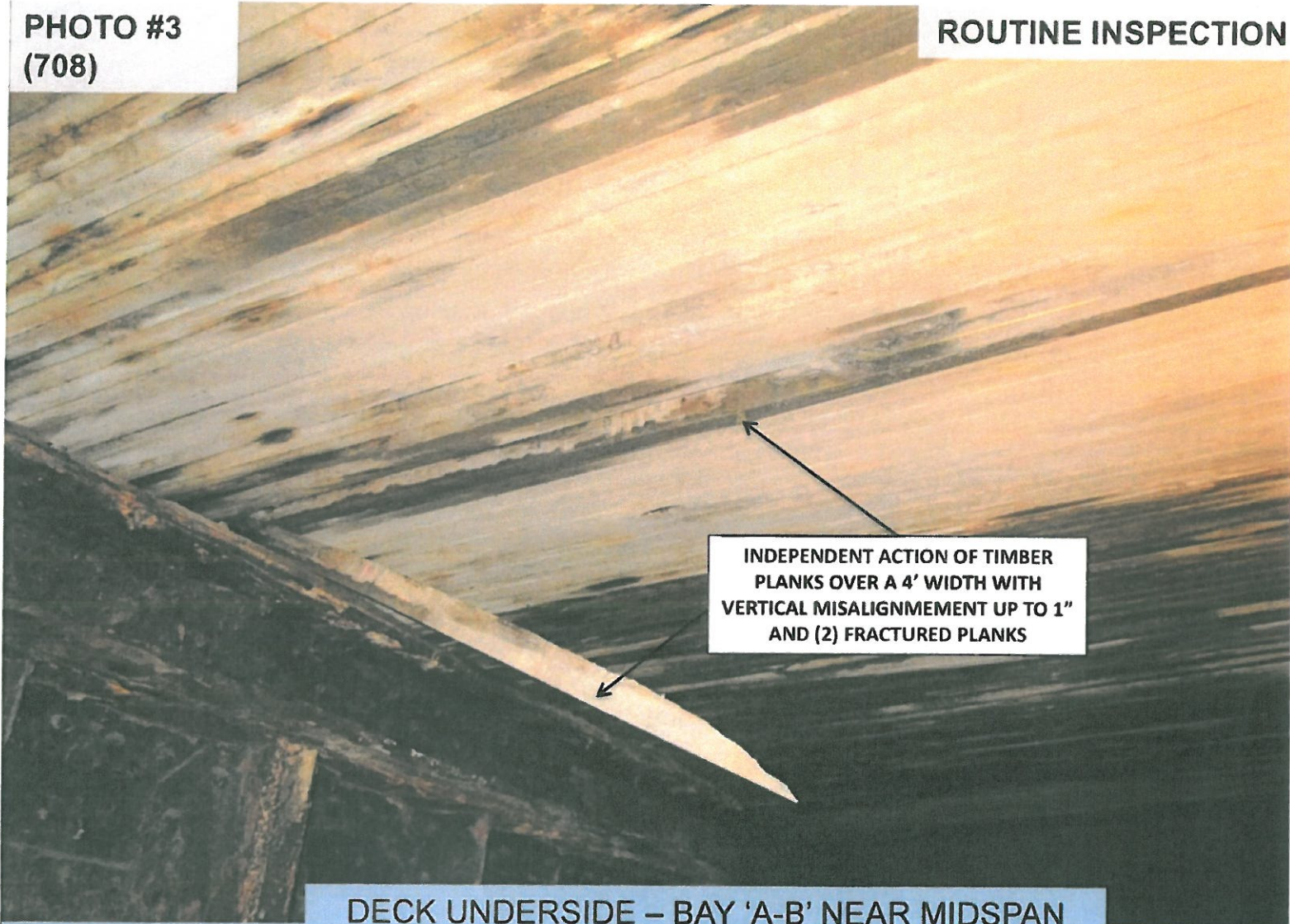
DECK UNDERSIDE – BAY 'A-B' NEAR GIRDER 'B'
(LOOKING NORTH)

BRIDGE #092201

6/21/2015

**PHOTO #3
(708)**

ROUTINE INSPECTION



INDEPENDENT ACTION OF TIMBER
PLANKS OVER A 4' WIDTH WITH
VERTICAL MISALIGNMENT UP TO 1"
AND (2) FRACTURED PLANKS

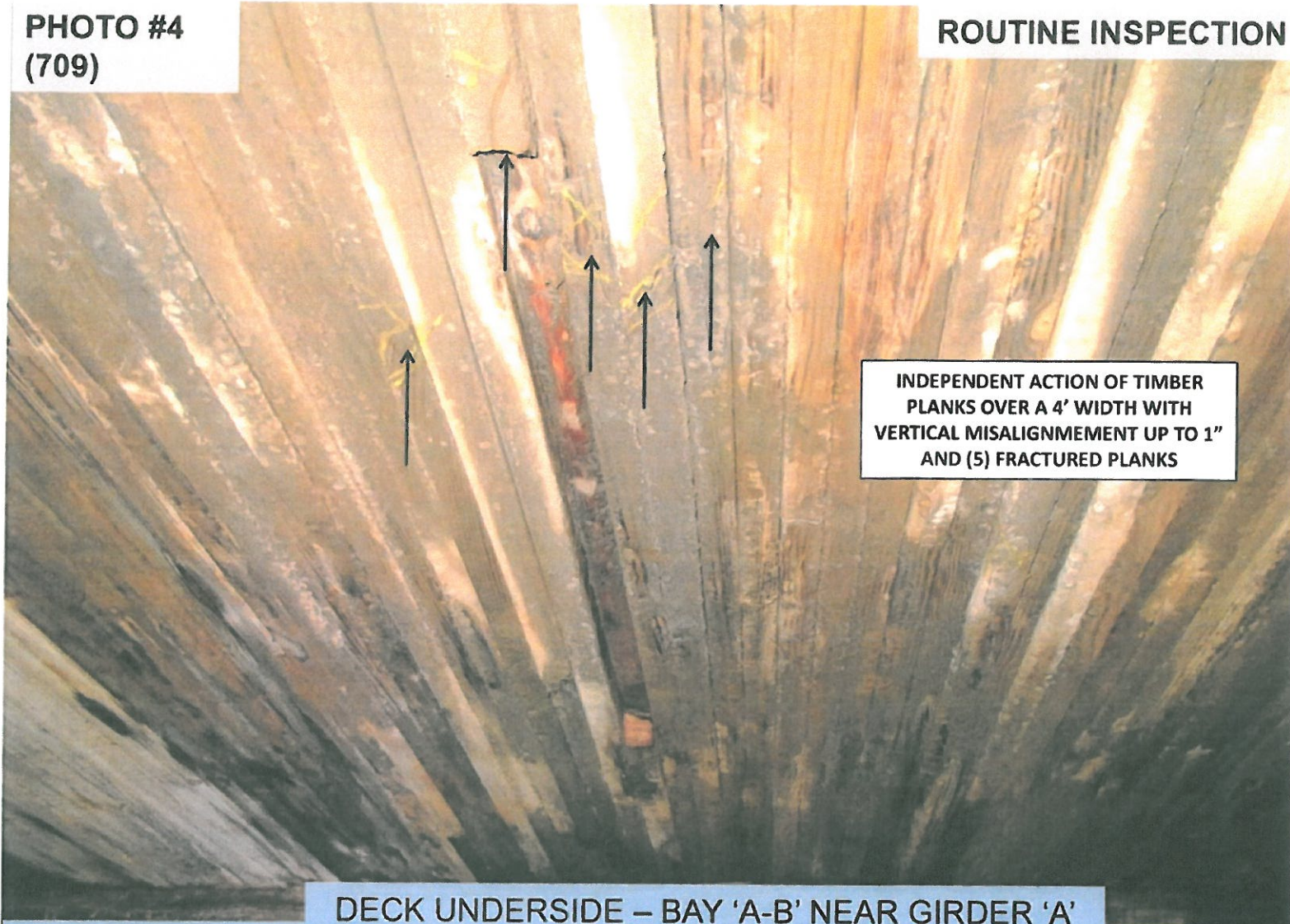
**DECK UNDERSIDE – BAY 'A-B' NEAR MIDSPAN
(LOOKING NORTH)**

BRIDGE #092201

6/21/2015

**PHOTO #4
(709)**

ROUTINE INSPECTION



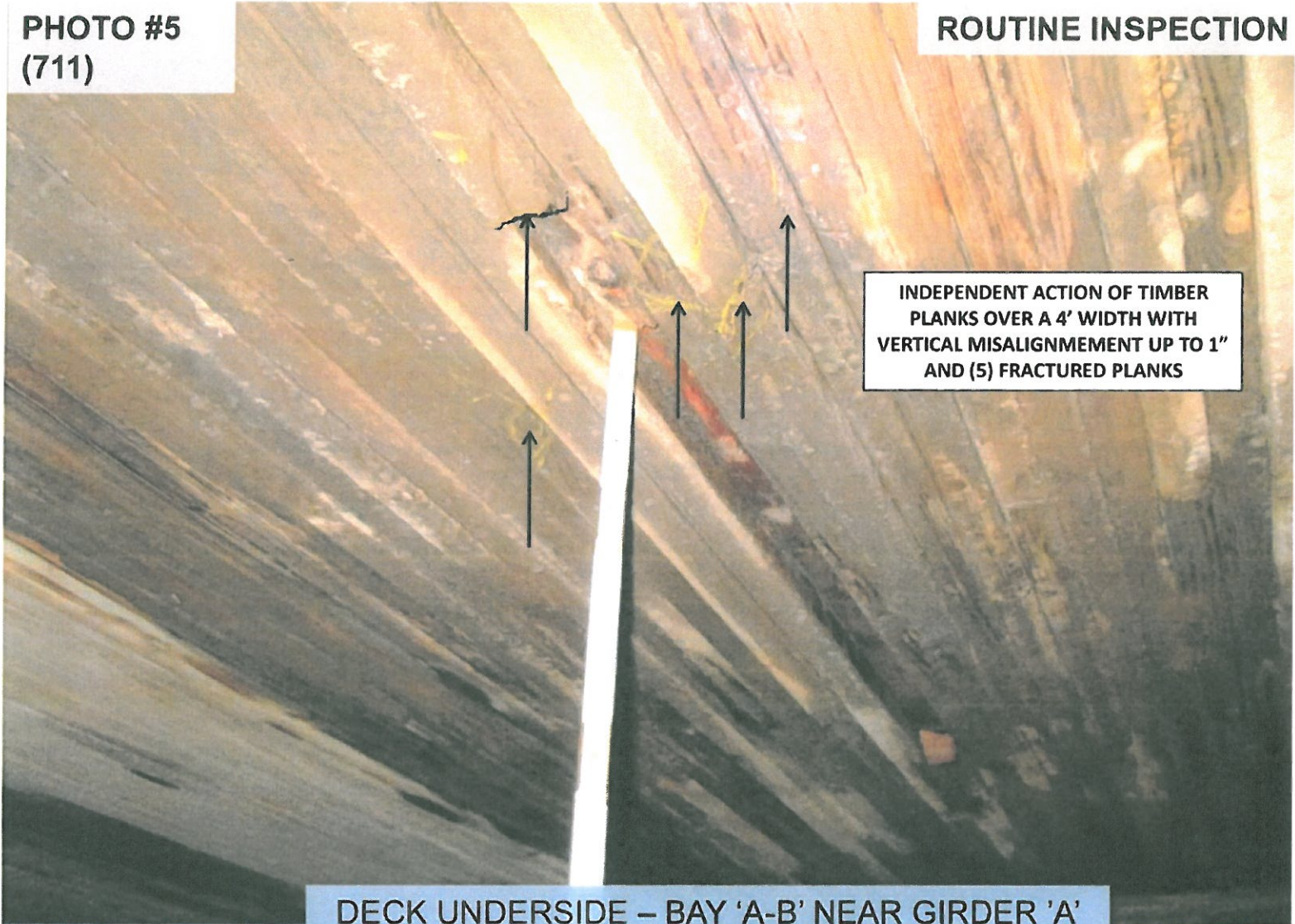
**DECK UNDERSIDE – BAY 'A-B' NEAR GIRDER 'A'
(LOOKING EAST)**

BRIDGE #092201

6/21/2015

PHOTO #5
(711)

ROUTINE INSPECTION



INDEPENDENT ACTION OF TIMBER
PLANKS OVER A 4' WIDTH WITH
VERTICAL MISALIGNMENT UP TO 1"
AND (5) FRACTURED PLANKS

DECK UNDERSIDE – BAY 'A-B' NEAR GIRDER 'A'
(LOOKING EAST)

BRIDGE #092201

6/21/2015

PHOTO #6
(723)

ROUTINE INSPECTION

½" DEEP ROT WITH
SOFT TIMBER AND
HEAVY MOLD GROWTH

TYPICAL ROT UP 8" LONG ALONG TOP FLANGE
OF FLORRBEAMS

BRIDGE #092201

6/21/2015



U.S. Department
of Transportation
**Federal Highway
Administration**

Rhode Island Division

June 23, 2015

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In Reply Refer To:
HDA-RI

Mr. Peter Alviti, Jr., P.E., Director
Rhode Island Department of Transportation
Two Capitol Hill
Providence, RI 02903-1124

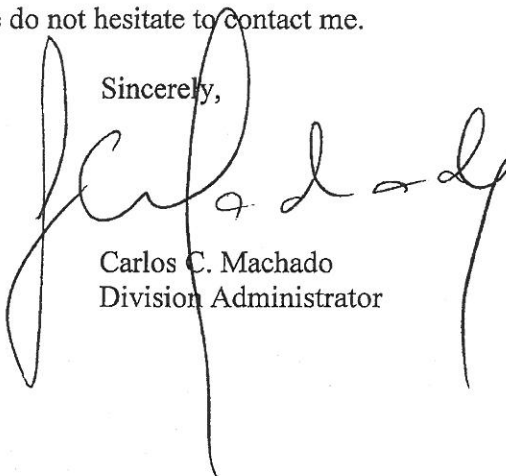
Subject: ***FHWA Concurrence***
Park Avenue Railroad Bridge Closure

Dear Director Alviti:

This document is sent to relay our concurrence in RIDOT's decision to close the Park Avenue railroad bridge in Cranston, RI. After inspection by the FHWA Division Structural Engineer we concur that the bridge is a safety risk to the motoring public and must be closed. We will continue to work with you to resolve this issue and restore this important transportation link as soon as possible.

If you need any further assistance please do not hesitate to contact me.

Sincerely,



Carlos C. Machado
Division Administrator

Cc: Mr. Peter Garino